

## Lichen nitidus: A case report of generalized form

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### Peer-review Method

External peer-review was done through double-blind method.

### ABSTRACT

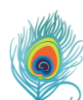
Lichen nitidus (LN) is a relatively rare chronic inflammatory skin condition of unknown etiology. Here-in we present this is a 28-year-old male patient presented to the outpatient clinic complaining of very itchy persistent skin lesions which have been observed for 6 months. Skin examination revealed multiple widespread, non-scaly, skin colored, tiny papules all over his body including face, neck, chest, back, abdomen and upper parts of all extremities. Hair, nail and mucous membranes were all normal. Skin biopsy was taken from the skin lesion. The epidermis showed mild spongiosis. The dermis showed patchy mononuclear cellular infiltrate in the upper dermis and vacuolar degeneration of the basal layer. Diagnosis of lichen nitidus was made. The patient was treated by topical corticosteroid and narrow-band UVB Phototherapy with excellent response. Our case is unusual in that it is a generalized form of LN with severe pruritus.

**Keywords:** Skin Diseases, Lichen Nitidus, Phototherapy

### 1. INTRODUCTION

Lichen nitidus (LN) is an uncommon chronic inflammatory skin condition first described in 1907 by Pinkus. The etiology is unknown (Requena et al., 2018; Schwartz & Goodman, 2020). Lichen nitidus does not show a clear predilection to race and sex but found to be more prevalent among children and young adults (Requena et al., 2018; Cuda et al., 2019). It is characterized clinically by multiple shiny 1- to 2-mm, flat-topped, uniform, skin-colored micropapules (Requena et al., 2018; Do et al, 2007; Synakiewicz et al., 2016). Koebner's phenomenon is commonly seen (Synakiewicz et al., 2016; Cho et al., 2014). LN is commonly asymptomatic but rarely pruritus can occur (Do et al., 2007; Synakiewicz et al., 2016).

Typically, the lesions are localized to the flexor aspects of the upper extremities as well as the genitalia, chest, abdomen and dorsal aspects of the hands. Infrequently, the face, neck, lower extremities, palms, soles and mucous membranes may be affected (Requena et al., 2018). A generalized form of LN has been reported. The generalized form usually has unpredictable clinical course (Do et al., 2007). LN commonly disappears spontaneously without consequence (Chaabane et al., 2013; Al-Mutairi et al., 2005). Other forms of the disease include Vesicular, hemorrhagic, perforating, follicular, palmoplantar, and linear that is often admixed with the typical lesions (Requena et al., 2018).



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Herein, we present a case of generalized form of lichen nitidus in a middle-aged man, which has been treated with topical steroid and Narrow-band UVB Phototherapy successfully.

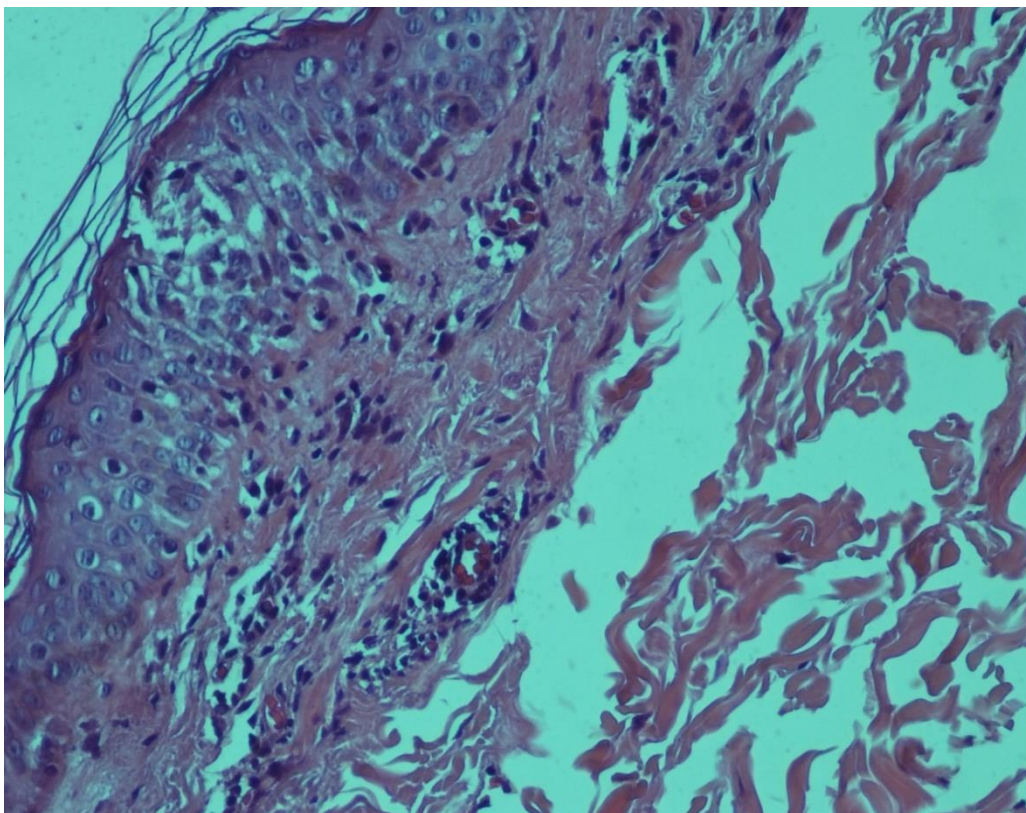
## 2. CASE REPORT

This is a 28 years old male patient presented to the outpatient clinic complaining of multiple itchy persistent skin lesions for 6 months. Review of systems, past medical history, drug history and family history were all unremarkable. Skin examination revealed numerous widespread, non-scaly, skin colored, tiny papules all over his body including face, neck, chest, back, abdomen and upper parts of all extremities (Figure 1 A and B). Hair, nail and mucous membranes were all normal.



**Figure 1A and B** Widespread, non-scaly, skin colored, tiny papules all over his body.

Differential Diagnoses include: lichen nitidus, Lichen Planus, Sarcoidosis, Lichen Spinulosus, Lichen scrofulosorum, Lichen Sclerosus, and secondary syphilis. Skin biopsy was taken from the skin lesion. The epidermis showed parakeratosis. The dermis showed patchy mononuclear cellular infiltrate in the upper dermis and vacuolar degeneration of the basal layer (Figure 2).



**Figure 2** The epidermis showed parakeratosis. The dermis showed patchy mononuclear cellular infiltrate in the upper dermis and vacuolar degeneration of the basal layer.

On the basis of the above clinic-pathological findings, a diagnosis of lichen nitidus was made. The patient was re-assured and prescribed a topical corticosteroid and Narrow-band UVB Phototherapy with excellent improvement.

### 3. DISCUSSION

Lichen nitidus is an uncommon inflammatory skin eruption. It's usually presented as multiple shiny, skin colored, discrete, dome shaped papules mostly localized to upper extremities, trunk, chest, genitalia (Leung & Ng, 2012; Kundak & Çakır, 2019). Our case is unusual as it is a generalized LN. Although LN is commonly asymptomatic, our patient presented with severe pruritus. Diagnosis of lichen nitidus is usually based on the clinical presentation but histologic findings may reveal distinctive features, the most striking feature of lichen nitidus is the presence of a well-circumscribed granulomatous infiltrate in the papillary dermis embraced by elongated rete ridges, suggesting a claw clutching a ball configuration (Cho et al., 2014; Chaabane et al., 2013; Chu & Lam et al., 2014). However, this feature was not present in our case. Treatment of LN include topical and systemic corticosteroids, topical tacrolimus Photochemotherapy (PUVA), ultraviolet A/ultraviolet B (UVA/UVB), acitretin, dinitrochlorobenzene (DNCB) or diphenylcyclopropenone immunotherapy, antihistamine, itraconazole, isoniazide, astemizole and cyclosporine all are effective options to treat lichen nitidus (Schwartz & Goodman, 2020; Do et al., 2007; Synakiewicz et al., 2016).

Treatment of LN is usually not necessarily in majority of the cases as spontaneous resolution is expected in majority of the cases within months to years. However, the treatment is required if the disease is symptomatic or in chronic, persistent generalized forms of the disease, or when it is cosmetically required. Our patient was treated with topical steroid and phototherapy successfully. In generalized lichen nitidus it has been reported phototherapy is the most effective treatment (Schwartz & Goodman, 2020; Do et al., 2007; Synakiewicz et al., 2016; Kim & Shim, 2006).

### 4. CONCLUSION

Lichen nitidus (LN) is a relatively rare chronic inflammatory skin condition. We report a case of 28 year old male Presented with generalized severely pruritic lichen nitidus that was treated successfully with topical steroids and UVB phototherapy.

#### Conflicts of Interest

The authors have no conflicts of interest that are directly relevant to the content of this clinico-pathological case.

#### Financial Resources

There are no financial resources to fund this study.

#### Informed consent

Informed consent was obtained from the patient.

#### Authors' Contributions

1. Dr. Khalid A. Al hawsawi, Dermatology consultant, MD (Principle Investigator and corresponding author) - *Abstract, introduction, case report, discussion and conclusion.*
2. Malak A. Aldahasi, MD (Co-Author) - *Abstract, Introduction and discussion*
3. Walaa A. Takrooni, MD (Co-Author) - *Discussion and conclusion*

#### Data and materials availability

All data associated with this study are present in the paper.

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